ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY

EXECUTIVE SUMMARY

- **Federal Agency Names:** Office of Global Programs (OGP), Office of Oceanic and Atmospheric Research (OAR), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce (DOC)

- **Funding Opportunity Title:** NOAA Climate and Global Change Program for Fiscal Year (FY) 2006

- **Announcement Type**: Initial Announcement**.** This program announcement is for projects to be conducted by investigators within the Federal Government.

- **Dates:** Letters of Intent should be received by 5:00 p.m. Eastern Time, May 20, 2005. Full proposals must be received no later than 5 p.m. Eastern Time, July 15, 2005.

- **Application Submission:** All submissions should be directed to: NOAA Office of Global Programs; Attn: Diane S. Brown, Grants Manager; 1100 Wayne Avenue, Suite 1210; Silver Spring, MD 20910-5603.

Funding Opportunity Description: The Climate and Global Change Program represents a NOAA contribution to evolving national and international programs designed to improve our ability to observe, understand, predict, and respond to changes in the global environment. This program builds on NOAA's mission requirements and long-standing capabilities in global change research and prediction. The NOAA Program is a key contributing element of the U.S. Climate Change Science Program, which is coordinated by the interagency Committee on Environmental and Natural Resources. NOAA’s program is designed to complement other agencies’ contributions to that national effort.

FULL ANNOUNCEMENT TEXT

I. Funding Opportunity Description

A. Program Objectives

The overall goal of the NOAA climate program is to understand climate variability and change to enhance society's ability to plan and respond. NOAA Climate and Global Change (C&GC) program aims at improved scientific understanding of the earth's past and present climate variability and change to improve climate forecast skill, increase the credibility of climate change projections, and the use of climate information for policy and decision makers and resource managers.

NOAA believes that the C&GC program will benefit significantly from a strong partnership with outside investigators. NOAA's broad objective is to establish a national information service based on reliable assessments and quantitative predictions of changing global climate. Once established, this service will help NOAA provide high-quality predictions and assessments to the public and private sectors, other federal and state agencies, and the international community. The near-term objective is to provide reliable predictions of global climate changes, both natural and human-induced, and their associated societal impacts on time scales ranging from seasons to a century or more.

NOAA's C&GC program is addressing climate initiatives outlined in the Climate Change Science Program (CCSP), which encompasses both the U.S. Global Change Research Program (USGCRP) and the Climate Change Research Initiative (CCRI). NOAA's program is an integral part of the interagency CCSP and it will continue to address a better understanding of the global climate system. Changing climate confronts us with significant economic, health, safety, and national security implications. NOAA has a significant responsibility in operational observation, research, prediction, and information management efforts for the global change study effort.

B. Program Priorities

In FY 2006, NOAA will only accept individual proposals in the Program Elements listed below (not Global Carbon Cycle). The names, affiliations and phone numbers of relevant program managers are provided. Investigators are encouraged to visit the C&GC program web page (http://www.ogp.noaa.gov) for general program information prior to submitting full proposals. Applicants may also communicate with program managers for information.

1. Atmospheric Composition and Climate (ACC):

The ACC program element pursues two overall research objectives: (1) to improve the predictive understanding of the radiative forcing of the climate system by aerosols and by chemically-active, short-lived greenhouse gases, such as tropospheric ozone and methane, and (2) to better characterize the recovery of the stratospheric ozone layer, including its role in climate change. The integrated research activities that address these objectives involve instrument development, global observations, laboratory studies, and theoretical modeling by NOAA and extramural partners. A hallmark of the Program is that its objectives are cooperatively framed with both national and international collaborators. Nationally, the Program's aerosol research is part of the interagency U.S. Climate Change Science Program. Internationally, the Program's research contributes to projects of the International Global Atmospheric Chemistry (IGAC) program of the International Geosphere-Biosphere Program (IGBP), and the Stratospheric Processes and their role in Climate (SPARC) program of the World Climate Research Program (WCRP).

For FY 2006, the ACC program element is soliciting proposals under three specific topics: (1) aerosol-cloud-climate interactions; (2) proposals to participate in the Gulf of Mexico ACC Study (GoMACCS), a NOAA-led interagency 2006 field program to study the influence of aerosols on the radiative balance of the atmosphere over the Gulf of Mexico and Western Tropical North Atlantic; and (3) integrating satellite observations of climate-relevant atmospheric constituents and processes with other measurement techniques.

An information sheet containing further details on the ACC program can be found at http://www.ogp.noaa.gov/grants/acc.htm. The ACC home page is located at http://www.ogp.noaa.gov/mpe/atmochem/. For further information, please contact the NOAA program manager, Kea Duckenfield (kea.duckenfield@noaa.gov, 301-427-2369, fax: 301-427-2073).

2. Climate Change Data and Detection (CCDD):

For FY 2006, the CCDD program element is soliciting proposals in the following three areas:

1) development of climate reference data sets;
2) climate change detection and attribution studies, in joint sponsorship with the Department of Energy's Climate Change Prediction Program; and
3) paleoclimate.

Information sheets containing further details on these activities can be found at http://www.ogp.noaa.gov/mpe/ccdd/. For further information, please contact one of the NOAA program managers, Chris Miller (Christopher.D.Miller@noaa.gov, 301-427-2376, fax: 301-427-2073) or Bill Murray (William.L.Murray@noaa.gov, 301-427-2378, fax: 301-427-2073).

3. Climate Dynamics and Experimental Prediction (CDEP):

NOAA's National Centers for Environmental Prediction (NCEP) and OGP jointly initiated the NOAA Climate Test Bed (CTB) in FY 2005. The goal of the CTB is to accelerate the transition of research and development into improved NOAA operational climate forecasts, products and applications. Initial priority areas of the CTB include providing routine assessments of operational climate forecast models, developing improved forecast tools and objective verification for NOAA's climate forecasts, and developing the next generation climate forecast system using a multi-model ensemble approach. The CTB will provide an operational testing environment to support short term (up to 3 years) competitive applied research and development projects that will result in a direct influence on operational methodologies, to be carried out jointly by scientists from NCEP, other NOAA organizations and the broader research community. Further details on CTB can be found at http://www.cpc.ncep.noaa.gov/products/ctb/.

For FY 2006, the CDEP program element is soliciting proposals for pilot CTB projects. The priority is to enhance monthly to seasonal climate forecasts and application products. Proposals aimed at enhancing operational seasonal forecasts using multi-model ensemble methodologies, improving forecast models used in operations based on the Climate Process and modeling Team (CPT) approach, and enhancing and evaluating the NOAA global ocean analysis system and products will be considered, subject to availability of funds. Details on U.S. CLIVAR Climate Process Modeling Teams can be found at http://www.usclivar.org/CPT/index-newcpt.html

An information sheet containing further details on NOAA's CDEP program can be found at http://www.ogp.noaa.gov/mpe/cdep/. For further information, please contact the NOAA program manager, Ming Ji (Ming.Ji@noaa.gov, 301-427-2373, fax: 301-427-2073).

4. Climate Prediction Program for the Americas (CPPA):

The CPPA is an integrated competitive research program with a goal to improve operational intraseasonal to interannual climate and hydrologic forecasting. The scientific basis for the CPPA program is that the climate predictability on intraseasonal to interannual time scales is largely determined by slow variations of the ocean and land surface conditions.

For FY2006, the CPPA program element is soliciting proposals under the following four research areas:

1) ocean, atmosphere and land-surface processes including drought;
2) predictability of climate variations on intra-seasonal to interannual time scale for the Americas, including predictability of the continental-scale monsoon systems;
3) science infusion into climate forecast, monitoring, and analysis systems that has operational applications; and
4) climate-based hydrologic forecasting capabilities and decision support tools for water resource applications.

An information sheet containing further details on NOAA's CPPA program can be found at http://www.ogp.noaa.gov/mpe/cppa/. For general CPPA science directions and implementation strategies, please refer to the GAPP Science and Implementation Plan (http://www.ogp.noaa.gov/mpe/gapp/gappscienceplan.pdf) and U.S. CLIVAR Pan-American Implementation Plan (http://www.usclivar.org/Pubs/PanAm_Plan_2002.pdf). For further information, please contact one of the NOAA program managers, Jin Huang (Jin.Huang@noaa.gov, 301-427-2371, fax: 301-427-2073) or Michael Patterson (Michael.Patterson@noaa.gov, 301-427-2379, fax: 301-427-2073).

5. Climate Variability and Predictability (CLIVAR):

The U.S. CLIVAR program seeks to observe, model and understand patterns of climate variability on seasonal to decadal time scales and to assess the predictability of such climate variability. The ultimate goal of NOAA's participation in CLIVAR is to improve predictions of climate variability and projections of climate change on seasonal to multi-decadal time scales, and regional spatial scales, for optimal use in resource planning and policy decision making. The program is designed to understand global climate variability and potential changes due to climate system feedbacks; to determine the spatial and temporal extent to which this variability is predictable and to develop the observational, theoretical, and computational means to predict variability and project potential future changes.

NOAA's CLIVAR research focuses on large-scale recurrent patterns of variability that influence climate on the regional scale, particularly over the U.S. Among these patterns are the El Nino-Southern Oscillation (ENSO), Pacific Decadal Oscillation (PDO), Tropical Atlantic Variability (TAV), the North Atlantic Oscillation (NAO), and the American monsoon systems.

For FY 2006, the CLIVAR program element is soliciting proposals in the areas of climate variability and predictability in the Atlantic and Pacific sectors, with particular emphasis on global coupled ocean-atmosphere dynamics. An information sheet containing further details on NOAA's CLIVAR program can be found at http://www.ogp.noaa.gov/mpe/clivar/.

Applicants should note that CLIVAR PACS research is supported under the new CPPA program element.

For further information, investigators may contact the NOAA program manager, James Todd (James.Todd@noaa.gov, 301-427-2383, fax: 301-427-2073).

6. Sector Applications and Research Program (SARP):

Climate science and services have the potential to help inform decision making in sectors and regions that are affected by climate variability and change. A multi-disciplinary, research, assessment and applications effort is fundamental to creating an effective bridge between societal need and scientific insights and products. Toward this end, the OGP Climate and Societal Interactions Division addresses a spectrum of issues ranging from problem identification and assessment, to the development of science-based solutions and tools, to the articulation of societal need back to the research and service communities.

For FY 2006, the SARP program is soliciting proposals for social-science based research focused on the role of climate and climate information in the management of coasts and water resources.

SARP is designed both to complement the RISA program as well as address new avenues of research that are necessary and not currently covered by RISA. SARP resources will concentrate on building an accumulated knowledge base in terms of tools, methodologies, and theories to understand and address decision challenges relevant to a varying climate and its role in critically impacted sectors. In FY 2006, the goal is to begin to perform a systematic assessment of requirements for climate information in coastal and water resources management.

An information sheet containing further details on the SARP program can be found at http://www.ogp.noaa.gov/mpe/sarp/. For further information, please contact one of the NOAA program managers, Nancy Beller-Simms (Nancy.Beller-Simms@noaa.gov, 301-427-2351, fax: 301-427-2082) or Lisa Farrow Vaughan (Lisa.Vaughan@noaa.gov, 301-427-2343, fax: 301-427-2082).

7. **NOAA Climate Transition Program (NCTP):**

Climate science and services have the potential to help inform decision making in sectors and regions that are affected by climate variability and change. A multi-disciplinary, research, assessment and applications effort is fundamental to creating an effective bridge between societal need and scientific insights and products. Toward this end, the NOAA Climate and Societal Interactions Division addresses a spectrum of issues ranging from problem identification and assessment, to the development of science-based solutions and tools, to the articulation of societal need back to the research and service communities.

NOAA's Climate Transition Program (NCTP) supports the transition of research into products, processes or policy tools that will expand regional decision makers' use of climate information in their operational settings. Competitive projects outline a structured pathway designed to result in the transition of a well-developed prototype decision tool to an operational outcome. The program supports structured partnerships between operational staff, decision makers, prototype developers, and an outreach/education element. Each proposal must have a cost-sharing percentage of at least 5% of total costs. For FY 2006, the NCTP Program is soliciting a limited number of new proposals.

For further information about this project, investigators may contact the NOAA program manager, Josh Foster (Josh.Foster@noaa.gov, 301-427-2370) or see http://www.ogp.noaa.gov/mpe/nctp/.

8. Regional Integrated Sciences and Assessments (RISA):

Climate science and services have the potential to help inform decision making in sectors and regions that are affected by climate variability and change. A multi-disciplinary, research, assessment and applications effort is fundamental to creating an effective bridge between societal need and scientific insights and products. Toward this end, the NOAA Climate and Societal Interactions Division addresses a spectrum of issues ranging from problem identification and assessment, to the development of science-based solutions and tools, to the articulation of societal need back to the research and service communities.

The Regional Integrated Sciences and Assessments (RISA) program supports integrated, place-based research across a range of social, natural, and physical

science disciplines to expand decision-makers' options in the face of climate change and variability at the regional level. It does this in a manner that is cognizant of the context decision-makers function within and the constraints they face in managing their climate sensitive resources. RISA possesses three distinct qualities: (1) fostering interdisciplinary research and assessment synthesis; (2) improving our understanding of and bridging the gap among climatic, environmental and societal interactions on different temporal and spatial scales; and (3) contributing to regional decision support and climate information service. A successful RISA program requires innovative and embedded long-term partnerships among a spectrum of interested parties including Federal, State, Native, regional, local and private entities. The program relies heavily on consolidating the results and data from ongoing NOAA/OGP disciplinary program elements, already funded in a region, into an integrated framework.

For FY 2006, the RISA program is soliciting proposals to support a single RISA project in each of the following regions: a) Alaska/Arctic, b) North/South Carolinas, and c) New England. We encourage projects that create partnerships among institutions focused on these regions and build on existing efforts within these regions to study the impacts of climate and expand research in support of climate services. Project duration must fall within the range of 3-5 years.

For additional information, investigators may contact the NOAA program manager, Caitlin Simpson (Caitlin.Simpson@noaa.gov, 301-427-2345, fax: 301-427-2082).

9. Global Carbon Cycle (GCC):

The U.S. Interagency Carbon Cycle Science Program (CCSP) seeks to answer two overarching questions: 1) How large and variable are the dynamic reservoirs and fluxes of carbon within the Earth system, and how might carbon cycling change and be changed in future years, decades and centuries, and 2) What are our options for managing carbon sources and sinks to achieve an appropriate balance of risk, costs, and benefits to society? For further information on the interagency program, please consult the web at http://www.carboncyclescience.gov.

For FY 2006, the GCC program element is not soliciting new proposals. For further information, investigators may contact the NOAA program manager, Kathy Tedesco (Kathy.Tedesco@noaa.gov, 301-427-2382, fax: 301-427-2073).

II. Award Information

A. Funding Availability

Please be advised that actual funding levels will depend upon the final FY 2006 budget appropriations. In FY 2004, $10M in first year funding was available for 62 new awards; similar funds and number of awards are anticipated in FY 2005. Total Anticipated Federal Funding for FY 2006 is $8M in first year funding for 40 - 60 number of awards. Federal Funding for FY 2007 may be used in part to fund some awards submitted under this competition. Past or current grantees funded under this announcement are eligible to apply for a new award that builds on previous activities or areas of research not covered in the previous award. Current grantees should not request supplementary funding for ongoing research through this announcement. We anticipate that the annual cost of most funded projects will fall between $50,000 and $200,000 per year. The exact amount of funds that may be awarded will be determined in pre-award negotiations between the applicant and NOAA representatives.

B. Project/Award Period

This Program Announcement is for projects to be conducted by investigators within the Federal Government, primarily over a one-, two- or three-year period.

III. Eligibility Information

A. Eligible Applicants

Eligible applicants are Federal Agencies, Federal Laboratories, and National Laboratories. Investigators from outside the Federal Government and Federal Joint Institutes should respond to the Program Announcement published in the Federal Register on April 22, 2005.

B. Cost Sharing or Matching Requirement

Cost Sharing is not required.

IV. Application and Submission Information

All proposals must be submitted in accordance with the requirements listed below. Failure to heed the requirements will result in proposals being returned without review.

A. Letter of Intent (LOI)

The purpose of the LOI process is to provide information to potential applicants on the relevance of their proposed project to the C&GC program and the likelihood of it being funded in advance of preparing a full proposal. While it is in

the best interest of the applicants and their institutions to submit an LOI, it is not a requirement; applicants who do not submit an LOI are allowed to submit a full proposal. Full proposals will be encouraged only for LOIs deemed relevant.

LOIs are encouraged to be submitted by facsimile or e-mail to the identified NOAA program element's program manager. LOI's can also be submitted electronically to ogpgrants@noaa.gov.

The LOI should provide a concise description of the proposed work and its relevance to the targeted program element. The LOI should be no more than two pages in length and should include the components listed below. If these components are not included, the LOI risks a delayed response and may not be considered by the program reviewers.

(1) Identification of the program element that is being targeted in the LOI.
(2) Specification of a tentative project title in the LOI.
(3) Name(s) and institution(s) of all principal investigator(s), and specification of which individual is the Lead principal Investigator.
(4) Statement of the problem.
(5) Brief summary of work to be completed, methodology to be used, data sets needed or to be collected.
(6) Approximate cost of the project.

A panel of program managers will review each LOI to determine whether the LOI is responsive to the program goals as advertised in this notice. An LOI response (e-mail or letter) will be sent back to the investigator encouraging or discouraging a full proposal. The final decision to submit a full proposal will be made by the investigator.

B. Full Proposal Application

The following forms and elements are required in each application. Failure to comply with these provisions will result in proposals being returned without review.

Proposals must be limited to 30 pages (numbered), including budget, investigators vitae, and all appendices, and should be limited to funding requests for 1 to 3 year duration; except for the RISA program element which must be a 3-5 year duration. Appended information may not be used to circumvent the page length limit.

Required Elements (all full proposals must include the following):

(1) Title page: The title page shall identify the Principal Investigator (PI) and the institutional representative and should clearly indicate which program element is being addressed. If more than one investigator is listed on the title page, please identify the lead investigator. The PI and institutional representative should be identified by full name, title, organization, telephone number and address. The title page must be signed by the PI and the institutional representative. The total amount of Federal funds being requested should be listed for each budget period.
(2) Abstract: An abstract must be included and should contain an introduction of the problem, rationale and a brief summary of work to be completed. The abstract should appear on a separate page, headed with the proposal title, institution(s), investigator(s), total proposed cost and budget period.
(3) Results from prior research: The results of each prior research project (during the last 3 years) relevant to the proposed effort should be summarized in brief paragraphs. This section should not exceed two pages.
(4) Statement of work: The proposed project must be completely described, including identification of the problem, scientific objectives, proposed methodology, relevance to the goal of the C&GC program, and the program priorities listed above. Benefits of the proposed project to the general public and the scientific community should be discussed. The statement of work, including references but excluding figures and other visual materials, must not exceed 15 pages of text. Proposals from 3 or more investigators may include a statement of work containing up to 15 pages of overall project description plus up to 5 additional pages for individual project descriptions.
(5) Budget Justification: A brief description of the expenses listed on the budget and how they address the proposed work. Item justifications must include salaries, equipment, publications, supplies, tuition, travel, etc.
(6) Budget: The proposal must include total and annual itemized budgets corresponding with the descriptions provided in the statement of work. Travel must be itemized to include destination, airfare, per diem, lodging and ground travel.
(7) Vitae: Abbreviated curriculum vitae are sought with each proposal. Reference lists should be limited to all publications in the last three years with up to five other relevant papers.
(8) Current and pending support: For each investigator, submit a list that includes project title, supporting agency with grant number, investigator months per year, dollar value and duration. Requested values should be listed for pending support.

c. Submission Dates and Time

Letters of Intent should be received at the Office of Global Programs no later than 5 p.m. Eastern Time, May 20, 2005. Applicants who have not received a

response to their Letter of Intent within four weeks should contact the identified NOAA program element's program manager or ogpgrants@noaa.gov.

Full proposals must be received no later than 5 p.m. Eastern Time, July 15, 2005. Proposals received after that time will not be considered for funding.

C. Electronic Submission Requirements

(1) LOIs should be submitted by facsimile or e-mail to the identified NOAA program element's program manager or to ogpgrants@noaa.gov.

(2) Full proposals should be submitted in PDF format to the identified NOAA program element's program manager AND to ogpgrants@noaa.gov.

V. Evaluation Criteria & Selection Procedures

A. Review and Selection Process

Once a full application has been received by OGP, an initial administrative review is conducted to determine compliance with requirements and completeness of the application.

Full proposals will be evaluated in accordance with the evaluation criteria below by (A) independent peer mail reviewers, and/or (B) independent peer panel reviewers consisting of both Federal and non-Federal experts. Only mail reviewers may be used if only a few applications are received. If peer panel reviewers evaluate all proposals, only their ratings may be used to establish the rank order. No consensus advice will be given by the panel.

The peer mail reviewers and peer panel reviewers rate each proposal using the above two evaluation criteria. The proposals will be scored from 1, for poor, to 5, for excellent, on Scientific/Technical Merit and from 1, for low, to 5, for high, on Importance/Relevance. The scores from each reviewer for each proposal will be averaged to produce an average numerical score for the proposal. The average scores for all proposals result in a numerical rank order.

Occasionally a reviewer may, due to lack of familiarity in a particular area, choose not to score a particular proposal. The scores from each peer panel reviewer for each proposal will be averaged to produce a single numerical score for the proposal. The average scores for all proposals result in a numerical rank order within each program element.

If peer mail review and peer panel review are both conducted, the available peer mail reviews will be provided to the peer review panel for use in its deliberations prior to providing its ratings.

If only a mail peer review was conducted, the Program Manager will use the rank numerical order of the mail reviews to determine funding recommendations. If only a peer panel review or both a peer panel review and a peer mail review were conducted, the Program Manager will use the numerical rank order of the peer review panel to determine funding recommendations.

The Program Manager will recommend proposals to the Selecting Official in numerical rank order unless the proposal is justified to be selected out of rank order based upon any of the factors listed in the following section. The Program Manager will review the amounts requested for each selected proposal (including costs for computing and networking services) and recommend the total duration and the amount of funding, which may be less than the proposal and budget requested. The Selecting Official will review the recommendations.

B. Evaluation Criteria

1. Importance/Relevance and Applicability of Proposal to the Program Goals (50%)

This criterion ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA, federal, regional, state, or local activities. For the C&GC grant program competition, this includes importance and relevance to the goals of the selected Program Element(s) (see Program Element descriptions above).

2. Technical/Scientific Merit (50%)

This criterion assesses whether the approach is technically sound and/or innovative, if the methods are appropriate, and whether there are clear project goals and objectives.

C. Anticipated Announcement and Award Dates

Subject to the availability of funds, review of proposals will occur during the 6 months following the full proposals due date. We anticipate that funding decisions on proposals will be made by January 2006 subject to/contingent to the final FY 2006 appropriation for NOAA by Congress and final allocation of funds to OGP by NOAA, and that funding for successful applicants will begin during winter 2006 for most approved projects. Proposals should use March 1, 2006, as the Start Date unless otherwise directed by the Program Manager.

VII. Agency Contacts

Please visit the OGP website for further information http://www.ogp.noaa.gov or contact the OGP Grants Manager, Diane Brown, NOAA/OGP, 1100 Wayne Avenue, Suite 1210, Silver Spring, MD 20910-5603
Phone: 301-427-2357
Fax: 301-427-2222
E-mail: ogpgrants@noaa.gov